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Financial development and income inequality in China:

An application of SVAR approach

Quanda Zhang[a], Rongda Chen[b],*

[a] School of Economics, Finance and Marketing, RMIT University, 455 Swanston St., Melbourne 3000, Australia.
[b] School of Finance, Zhejiang University of Finance & Economics, 18 Xueyuan St., Hangzhou 310018, China.

Abstract

This paper studies the relationship of financial development and income inequality in China over the period of 1978-2013. Using the structural vector auto-regression (SVAR), the empirical results are consistent with the G-J hypothesis of an inverted U-shaped relationship between financial development and income inequality. An economy in its initial stages of financial development would present increasing inequality and only in a second or even third stage of development would inequality actually decrease. The evidence is valid for two indicators defined to measure the scale and the efficiency of financial development, respectively. Financial reform aimed at forming an appropriate financial system should be accelerated to help to reducing income inequality in China.

Keywords: financial development; income inequality; SVAR; financial scale; financial efficiency

1. Introduction

Many scholars have attempted to investigate the reasons for the growing income inequality from various perspectives. However, there is not enough attention paid to analyze the effects of financial development on income inequality theoretically and empirically. As China's financial reform is in a crucial period, a multi-directional and multi-level financial system is emerging, which will promote the efficiency of the allocation of financial resources to boost the economy.

This paper, however, attempts to fill the gap in the literature on financial development and income inequality in China. I empirically examine the relationship of financial development and income inequality by employing the structural vector auto-regression (SVAR) approach to co-integration. The sample period used in this study covers the data from 1978 to 2013. And financial development is defined as expansion of the scale and the

* Corresponding author. Tel.: +86-571-87557391;
E-mail address: rongdachen@163.com.

improvement of the efficiency. In addition, effects of both urbanization and fiscal expenditures are taken into consideration during the empirical process. The key finding is quite consistent with G-J hypothesis. The result implies that financial development is beneficial both to the rich and the poor in the long run. Therefore, certain policies regarding finance reform need to be adjusted and accelerated not only to reduce the imperfections of financial market, but narrow the income gap at the same time as well.

The rest of the paper is organized as follows. Section 2 provides a review of both theoretical and empirical studies on the relationship between financial development and income inequality. Section 3 describes the dataset and Section 4 explains the empirical methodology. Section 5 is the empirical results and some discussions. Section 6 draws conclusions and offers some policy suggestions.

2. Literature Review

2.1. Theoretical review

Since 1990s, the relationship between financial development and income inequality has attracted attention and the theoretical research, to date, can be broadly categorized into three schools of thought.

First, the inverted U-hypothesis. Greenwood & Jovanovic [10] develop a theoretical model that predicts the inverted U-shaped relationship between financial development, income inequality, and economic development (G-J hypothesis). In their model, there are two investment opportunities for each agent of the economy: the first offers a safe but low return and the second yields a high return but is more risky. Eventually most of the agents have their access to the financial services, and the economy enjoys the reversal trend of income gap. Therefore, financial development may widen income inequality at the early stages of development while tend to reduce income inequality as the average income increases. Based on G-J Model, Matsuyama [13] develop their models to analyze the effects of initial wealth distribution, credit market development on the income inequality in the long run through trickle down effects respectively, and their conclusions are consistent with G-J hypothesis. With analytical and numerical methods, Townsend & Ueda [21] calibrate and make tractable a prototype canonical model which simplifies and improves the G-J Model.

Second, the inequality-narrowing hypothesis. This theory holds that financial development narrows the income gap as the poor enjoy more opportunities to the financial services. Galor & Zeira [18] investigate the role of wealth distribution in macroeconomics through investment in human capital. According to their research, the wealth initial affects aggregate output and investment both in the short and in the long run in the presence of an imperfect credit market and indivisibilities in investment in human capital. With the development of the credit market, an increasing number of agents of the economy are able to get sufficient money investing in human capital thus to decrease income equality. Similarly, Banerjee & Newman [1] construct a three-sector model, in which two of the technologies require indivisible investment. The capital market imperfections prevent the poor to run these indivisible, high return technologies while the reverse is true for the rich. Therefore, the initial wealth distribution has long-run effects on income distribution and growth in the presence of capital market imperfections. Ghatak & Jiang [14] simplify the model proposed by Banerjee & Newman [1] and have the same conclusions with them. Mookherjee & Ray [5] argue that when human capital accumulation generates pecuniary externalities across professions, and capital markets are imperfect, persistent inequality in utility and consumption is inevitable in any steady state. Low inequality of initial wealth distribution leads to a low inequality of equilibrium income.

Last, the inequality-broadening hypothesis. This viewpoint is held by few scholars. Gregorio [12] construct a life-cycle model with endogenous growth where individuals face borrowing constraints and have to decide during their youth how much time to devote to education. Financial development enables individuals with different endowments make their choices whether human capital investment is needed. Financial development increase income inequality as those with more endowments for learning become entrepreneurs. According to